



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,574	01/28/2002	Mario F. DeRango	CM04664H	5444
22917	7590	11/18/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			SHAH, CHIRAG G	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/058,574	DERANGO ET AL.	
Examiner	Art Unit		
Chirag G. Shah	2664		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 11-14 is/are allowed.

6) Claim(s) 1-10 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 28 January 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 6,765,927), hereinafter Martin in view of Braden et al. (RSVP Version 1, RFC 2205), hereinafter Braden.

3. Regarding claim 1, Martin discloses in **figs. 1 and 4** of a communication system including a plurality of reservation proxy elements [**as disclosed in claim 9 and fig. 1, where switch 140 and 160 each include an RSVP host proxy agent**], a method comprising the reservation proxy elements [**each edge switch includes an RSVP host proxy agent and functions as a proxy for reserving a path for transmission as disclosed in claim 9 and in col. 3, lines 15-27**] performing steps of:

receiving a multicast group address [**destination address**] to be used for a prospective communication call [**as disclosed in col. 3, lines 15-27**, edge switch 140 receives the data packet having an address of sources host 110 as a source address and a destination address. **Note as disclosed in col. 8, lines 4-10**, the invention may be applied to multicast flows between a source host and multiple destination hosts, wherein one or more switches act as RSVP host proxies for the sources host and/or one or more

destination hosts. Thus this implies, in a multicast scenario, **the switch 140 receives a multicast group address as the destination address**];

sending, to one or more network devices [switch 160, fig. 1], one or more messages [RSVP Path messages and RSVP Resv messages, see col. 3, lines 15-45] defining senders from which packets addressed to the multicast group address are eligible to be received during the prospective call;

exchanging one or more control messages [**as disclosed in col. 3, lines 15-45, RSVP Path and RSVP Resv messages**] across the packet network link [**as disclosed in figure 1, backbone 130 supporting (packetized data) across link between switch 140 and 160**], thereby signaling one or more network devices [switch 160 in figure 1] to establish a reservation of communication resources on the packet network link for the prospective communication [**as disclosed in figure 1 and in col. 3, lines 15-45, the edge switch 140 functioning as a proxy, exchanges RSVP Path messages and RSVP Resv message on the transmission medium interconnection destination host 120 and edge switch 160, upon edge switch 160 receiving an RSVP Resv message in conjunction with policy server and in accordance with the RSVP router function, determines whether or not to accept the reservation**].

Martin discloses in col. 2, lines 67 to col. 3, lines 5 that edge switches 140 and 160 support router function of RSVP and further disclose in col. 5, lines 44-48 that edge switches may be routers or gateways, but explicitly fails to disclose of the edge switch performing the step of joining the multicast group prior to exchanging control information messages across packet network link.

Braden teaches of a **Router using RSVP in figure 9**. Braden further **discloses on page 27, section 2.10**, a receiver (router RSVP) joins the multicast group specified by Dest Address (the IP destination address of data packets, may be a unicast or multicast address as disclosed in last paragraph of page 6). Braden furthermore, **discloses on page 28-2nd bullet**, that when a new sender starts sending data but there are no multicast routes because no receivers have joined the group (H1). Then the data will be dropped at a router node. Thus, the receiver of the data (router) joins the multicast group as specified by the destination (multicast) address in the data. In addition, as mention before, when no multicast routes are available, the data gets dropped at the router node, which clearly signifies the RSVP router's role as a proxy. Thus, the proxy router joins the multicast address prior to exchanging the control message and after receiving a multicast group address.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include the step of the proxy element joining the multicast group prior to exchanging control messages as taught by Braden. One is motivated for the receiver (router) to join the multicast group in order to appropriately and correctly forward path messages towards all the destination (multicast) addresses using their local multicast routing table for establishing bandwidth link reservation.

Regarding claim 2, Martin discloses wherein the step of exchanging control messages comprises exchanging RSVP path and reserve messages with the eligible

senders [as disclosed in col. 3, lines 15-45, RSVP Path and RSVP Resv messages are exchanged with the eligible sender upon meeting host proxy criterion] as claim.

4. Claims 3-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Braden as applied to claim1-2 above, and further in view of Maher et al. (U.S. Patent No. 6,298,058), hereinafter Maher.

Regarding claim 3, Martin in view of Braden discloses the step of sending, to one or more network devices, one or more messages RSVP Path messages and RSVP Resv messages defining senders from which packets addressed to the multicast group address are eligible to be received during the prospective call. Martin in view of Braden explicitly fail to disclose wherein the step of sending comprises sending IGMPv3 membership reports identifying only specified reservation proxy elements as eligible senders. Maher discloses in **col. 14, lines 15 to 35 of a step 812** of sending IGMPv3 message having an exclusive filter to “filter” out the non-selected sources/subscriber units, thus defining senders eligible for receiving messages during the prospective call. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin in view of Braden to include the features of sending out IGMPv3 message as taught by Maher in order to exclusively send messages to one or more network devices requesting to receive the selected payload information assuring reduction in processing time.

Regarding claim 4, Martin discloses wherein the specified reservation proxy elements [**switch 140 and 160 each include an RSVP host proxy agent, see fig. 1**]

comprise zone controllers associated with certain zones of the communication system [switch 140 as disclosed in col. 5, lines 44-48 and fig. 2 that edges switches may be routers or gateways, which control RSVP protocol agent 248; furthermore, note: Edge switches communicating wirelessly with hosts separated by links as disclosed in figure 1 signifies a plurality of zones, which is read in light of the specification on page 4, where it is written that a plurality of zone includes a plurality of base stations communicating via RF resources with wireless communication units, thus each edge switch represents a zone with a controller].

Regarding claim 5, Martin discloses wherein the specified reservation proxy elements [switch 140 and 160 each include an RSVP host proxy agent, see fig. 1] comprise zone controllers associated with all zones of the communication system [switch 140 as disclosed in col. 5, lines 44-48 and fig. 2 that edges switches may be routers or gateways, which control RSVP protocol agent 248; furthermore, note: Edge switches communicating wirelessly with hosts separated by links as disclosed in figure 1 signifies a plurality of zones, which is read in light of the specification on page 4, where it is written that a plurality of zone includes a plurality of base stations communicating via RF resources with wireless communication units, thus each edge switch represents a zone with a controller and specified reservation proxy].

Regarding claim 6, Martin discloses wherein the specified reservation proxy elements [switch 140 and 160 each include an RSVP host proxy agent, see fig. 1] comprise zone controllers [switches 140 and 160 as disclosed in col. 5, lines 44-48 and

fig. 2 that edges switches may be routers or gateways, which control RSVP protocol agent 248, suggest each switch includes a zone controller], associated only with participating zones of the communication system, the participating zones defining zones that include participating devices for the prospective call [see fig. 1, the zone controllers of switch 140 and 160 are the participating controllers since the prospective call is between a device 110 and 120].

Regarding claim 7, Martin discloses wherein the step of exchanging control messages comprises exchanging call control information with the specified zone controllers [**the RSVP Path and RSVP Resv call control message are being exchanged between the zone controller in edge switch 140 and 160, see fig. 1**].

Regarding claim 8, Martin discloses **in col. 3, lines 33-53 and in col. 4, lines 27-38** wherein upon the controller [**switch 140**] receiving indicia of availability of the communication resources [**edge switch 160 upon determining to accept the reservation sends RSVP Resv message to edge switch 140 of the availability of resource**] on the packet network link [**via backbone 130 supporting packetized link**] for the prospective communication, the controller [**switch 140**] performs the step of:

granting the call request [**as disclosed in col. 3, lines 47 to col. 4, lines 2 and in col. 4, lines 27-38**, Edge Switch 140 having management interface 240 and network interfaces to host are linked by bus 260 for transmitting and receiving management information including QoS information for various flows, the QoS information contains accepted call grant reservations].

Martin fails to explicitly disclose instructing the participating hosts to join the multicast group address to participate in an active call.

Braden discloses on page 27, section 2.10, that before a session can be created, the session identification must be assigned and communicated to all the senders and receivers. Furthermore, receiver hosts joins the multicast group specified by DestAddress, using IGMP. Thus, the controller (RSVP router of figure 9), upon receiving upon receiving RSVP Res message may forwards QoS information having DestAddress of the flows. Note as disclosed in the last paragraph of page 6, in multicast scenario, the IP destination address of data packets, may be a multicast address.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include receiver host joining the multicast group address as taught by Braden. One is motivated for participating hosts to join the multicast group address in order to establish a communication session for all communicative entities over a reservation path.

Regarding claim 9, Martin discloses of comprising: sourcing, by a sourcing host [edge switch 140] during the active call, information [RSVP Path message] addressed to the multicast group address [as disclosed in figure 3a, col. 4, lines 64-67, RSVP Path message includes source and destination addressing information and as mentioned before, col. 8, lines 4-10 clearly discloses that invention may be applied to multicast flows; and distributing the information, from the network devices to participating hosts having joined the multicast address [as disclosed in col. 3, lines 20-32, the RSVP path message traverses the backbone network 130 and edge switch 160 along a flow-path

between source host 110 and destination host 120; and as disclosed in col. 3, lines 33-45, Edge switch 160 receives the RSVP Resv message and traverses the RSVP Resv messages across backbone network 120 and edge switch 140].

Regarding claim 10, Martin in view of Braden fails to explicitly disclose wherein the call control information includes indicia of an end of the active call, the method comprising the at least one zone controller instructing the participating hosts to leave the multicast group address to end participation in the call. Maher discloses in col. 10, lines 22-42 of the zone controller distributed call end IGMP “leave” messages to the subscribers. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the zone controller of Martin in view of Braden to explicitly disclose of distributing to the subscribers of call end message as taught by Maher. One is motivated as such in order to reduce latency and to utilize bandwidth efficiently.

Allowable Subject Matter

5. Claim 11-14 allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs

November 2, 2005



Chirag Shah
Patent Examiner, AU 2664